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**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Application Number: 10/702,361
Filing Date: November 06, 2003
Appellant(s): MERLAU ET AL.

Thomas D. Rogerson
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 03/27/08 appealing from the Office action mailed 09/05/07.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

## Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over 2004/0057923 A9 ('923) or US 2003/0147833 A1 ('833).

The limitations of claims 1 and 7 are taught by '923 or '833:

- Both '923 and '833 teach a reshapable hair styling composition comprising, optionally in a cosmetically acceptable vehicle, at least one (meth)acrylic copolymer which comprises: (a) units derived from at least one monomer chosen from butyl (meth)acrylate monomers, (b) units derived from at least one monomer chosen from hydroxy alkyl (meth)acrylate monomers, and optionally units derived from at least one monomer other than the (a) and (b) monomers (abstracts and claims 1-2). Both applications teach at least one additional constituent is chosen from a cationic, anionic, nonionic and amphoteric polymers ('923 claims 21-22 and '833 claims 20-21).
- Both '923 and '833 teach that the at least one (meth)acrylic copolymer comprises (a) n-butyl (meth)acrylate, (b) 2-hydroxy ethyl (meth)acrylate and (c) can be

methyl (meth)acrylate, ethyl (meth)acrylate, (meth)acrylic acids, etc. ('923 claims 3-12 and '833 claims 3-12). '923 also teaches that (a) can be from about 10 to about 90 weight %, (b) from about 2 to about 50 percent (pg. 1, [0006]).

- The cationic, anionic, nonionic and amphoteric polymers of both '923 and '833 at taught to include: cationic conditioning polymers like Gaffix VC 713 (Tg 85°C, '923 pg. 6, [0062]),
- anionic polymers like acrylate copolymers Acrylidone LM and Luvimer 100 P (Tg ~95°C), Gantrez AN or ES (Gantrez ES 425), Resin 28-2930, Flexan 130 (Tg 112°C, '923 pg. 9-10 [0108, 0111, 0117, 0119-0120]);
- amphoteric polymers including Amphomer LV 71 or Lovocryl 47 (Tg 130°C, '923 pg. 11 [0131]),
- and nonionic polymers including PVP, PVP/VA (Tg 98°C), polyurethanes (Tg 74.5-120°C), etc ('923 pg. 13-14 [0158-0161, 0171]).
- Examiner respectfully points out that the polymers taught by '923 and '833 are taught by applicants specification Table 1 to have acceptable high Tg for the 'first polymer', pg. 12-13, and thus, like the instant application, the difference in Tg between the first polymer, an acid-functional polymer, and the second polymer, a copolymer, can be 40° C or more.
- '923 and '833 teach further constituents chosen from reducing agents, silanes, fatty substances, thickeners, plasticizers, anti-foam agents, fillers, sunscreens, etc ('923 claims 21 and '833 claims 20). '833 teaches that the composition is in a form chosen from sprays, aerosols, mousses, gels, sticks, muds, lotions, creams,

dispersions, and emulsions (claim 23) and both teach that the composition is "reshapable" providing hair styling that can be restored or modified without new material or heat being applied and is long lasting 10-24 hours without drooping or loss of setting ('833 pg. 2 [0018] and '923 pg. 3 [0026]).

- '923 and '833 do not teach the at least one (meth)acrylic copolymer with a Tg of 20-35°C or a film of specific tensile strength modulus, but do teach in claims 20 a Tg from about –100°C to about 15°C.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look to '923 and '833 for a composition with cosmetically acceptable vehicle, at least one (meth)acrylic copolymer, and a second polymer for hair styling. One of ordinary skill in the art would know how to optimize the ranges of the Tg for the at least one (meth)acrylic copolymer of '923 and '833, as the MPEP 2144.05 states "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." Especially, since the art teaches a Tg of about 15°C, which reads on the instant claim 1 of Tg of 20°C and one of ordinary skill in the art would know how to obtain a specified glass transition phase given workable ranges of the monomers disclosed in '923 and '833. Furthermore, both '923 and '833 teach that the hair styling composition is 'reshapable' without new material or heat being applied and is long lasting 10-24 hours without drooping or loss of setting and '833 teaches fixing products such a sprays, gels, mousse, etc which are known in the art to form films and since the specific secondary

polymers are disclosed and the monomers of the first polymer taught by the art it would have been prima facie obvious to make the composition of the instant application.

**(10) Response to Argument**

Appellant argues that '923 or '833 fail to render obvious the instant claims for the following reasons (A): (Appellant has relied on '923 in the brief and so the Examiner shall respond likewise).

(A) Appellant's arguments with respect to claims 1 and 7 have been considered but not persuasive. Appellant argues that the prior art requires only the copolymer containing butyl (meth)acrylate and hydoxyalkyl (meth)acrylate monomers and as optional one or more additional copolymerizable monomer (Brief, pg. 11, 3rd paragraph) and that they only as an option include another polymer. The Examiner respectfully disagrees with this, as '923 teaches that hair styling compositions desirably contain hair conditioning benefit agents that ease the combing and cause soft hair feel [0004] and further that such known "conditioning agents" which improve cosmetic properties of the hair such as softness, ease of disentangling, feel and lack of static electricity include numerous anionic, cationic, amphoteric and nonionic polymers [0050] which many of which overlap with the instant claims "first polymer" and meet the Tg limitation of the instant "first polymer" as detailed in the rejection above (such as Amphomer LV 71 or Lovocryl 47 (Tg 130°C, '923 pg. 11 [0131]) taught above). Thus it would seem that

these additional polymers (Appellant's "first polymer" or high Tg) are preferably added to the inventive copolymer (Appellant's "second polymer" or low Tg) with a known improvement and benefit to the hair as taught by '923 [0050]. Appellant's appear to agree with '923 on this matter and point to their Examples in Table 6 disclosed in the instant specification and state that "the low Tg polymers alone provided unacceptable film properties- toughness and Tackiness" (Brief, pg. 13, last paragraph), just as '923 states that addition of the conditioning polymer "improves cosmetic properties of the hair such as softness, ease of disentangling, feel and lack of static electricity" [0050]. '923 simply describes the composition with respect to the end result on the hair, while Appellant has chosen to discuss the composition in terms of the film properties, but both products result in a smooth and good feel (not tacky), ease of disentangling and lack of static electricity, long lasting, durable and reshapable for up to 24 hours (tough and flexible) [0004, 0026, 0050].

Appellant's further argue that a range of Tg that extends to about 15 °C, does not read on the instant claim 1 "second polymer or polymer mixture with a Tg from 20 to 35 °C" and that there is a "significant difference between the Tg range disclosed in '923 and '833" and the instant range (claim 1 and Brief, pg. 13, 2nd paragraph). The Examiner respectfully disagrees as "about 15 °C" as taught by '923 and '833 can indeed include a Tg of greater than 15 and reads on the 20 °C of the instant claims, furthermore the polymers and polymer mixtures as instant claimed are included in the inventions of '923 and '833, and would thus have similar Tg. Because '923 and '833 teach a range of Tg that is so close to Appellants and monomers that are the same as

Appellant, it would have been obvious to obtain the second polymer as claimed in the instant invention. Further proof of this is in Appellant's own specification which teaches the "second polymer" with includes Tg ranges of -20 to 35 °C (pg. 2, line 21). The instant claims have been amended to exclude the lower range but the Examples in Table 3 and 4 show that the Tg's in the lower range (below 20 °C) of the 'second polymer' in fact result in a composition with the same desirable film properties (see Examples 1a, 4a, 7a (Tg of 6.4°C) and Examples 7b, 8b, 15b, 19b, and 20b (Tg's of 13, 18 and 12 °C) all have the same superior film properties of "4"). Thus is would appear that there is not a "significant difference" between the ranges in '923 and '833 and the present invention as all result in compositions with the same film properties.

Appellant's argue that their instant claims overcome the disadvantages and further result in a "profound change in film properties", and that Appellant's instant ranges "demonstrate the uniqueness" of the Tg for the second polymer (Brief, pg. 13, last paragraph; pg. 14, top and middle paragraph). However, the Examiner respectfully disagrees with this, as careful inspection of the Tables and Examples in the instant specification seem to show that the "second polymer" with a Tg below 20 °C has a more consistent result of the superior film properties than the instant claimed ranges, which appear to be at best unpredictable. Table 3 teaches 4 Examples (1a , 2a, 5a, and 7a) which have the preferred film properties of all "4" for Flexibility, Toughness and Tackiness. Examples 1a, 4a, and 7a all have a "second polymer" Tg of 6.4°C, while only 5a has a Tg within the instant claimed range for the "second polymer" (25°C). Further the other Examples in Table 3 that include film properties of "3" (less than

preferred of "4"), include 2 where "second polymer" is within the claimed range of 20-35°C (see 3a and 6a). Looking to Table 4 similar results are observed, in that Examples with a low Tg (below 20°C) have film properties of all "4" in 5 out of 8 trials (see 7b, 8b, 15b, 19b, and 20b for successes and 1b-3b for failures), while the examples with a low Tg between 20-35°C (instant claimed) result in success only 5 out of 11 trials (see 4b, 5b, 9b, 13b, and 14b for successes and 6b, 10b-12b, and 16b-18b for failures). Thus, Appellant's own specification appears to teach that Tg's below 20°C in the second polymer also result in the same desirable film properties, overcome previous disadvantages and that the instant claimed range of 20-35°C is not unique.

The Examiner respectfully points out and has outlined above in the rejection the numerous 'first polymers' exemplified in '923 and '833 that are capable of being combined with the 'second polymer' and are further as taught by applicant in the instant specification as meeting the requirements of the 'first polymer'. The Tg's of these 'first polymers' of '923 and '833 are specifically within the range as claimed in instant claim 1 and are further specifically pointed to in the instant specification Table 1. With so many of these 'first polymer' components being taught, and combined with the '923 and '833 'second polymer' (such as Amphomer LV 71 or Lovocryl 47 (Tg 130°C, '923 pg. 11 [0131]) taught above), it would have been obvious to combine with the 2 polymers in a composition as taught by '923 and '833 with improved hair benefit.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Bethany Barham/
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Conferees:

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